

CLAIMS

What is claimed is:

1. A method for selecting an acoustical response of a
5 hearing aid, the method comprising the steps of:
selecting one of multiple acoustical formats of
the hearing aid by transmitting a command;
receiving the command at the hearing aid to
determine which of the multiple acoustical formats is
10 selected by a user; and
compensating for a variation in a component of
the hearing aid device based on a compensation factor
that is previously programmed in the hearing aid, the
compensation factor being used to adjust the
15 acoustical response of the hearing aid so that a
selected acoustical format of the hearing aid conforms
to a standard.
2. A method as in claim 1, wherein the command includes
digital data that is stored in a memory device of the
20 hearing aid to select an acoustical format.
3. A method as in claim 1, wherein the received command
includes digital data that is latched to drive at
least one input to a digital filter that defines the
25 acoustical response of the hearing aid.
4. A method as in claim 1, wherein the user presses a
keypad of a wireless transmitter module to select the
acoustical format and a corresponding command is

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transmitted via a wireless signal to the hearing aid device to program the acoustical format.

5. A method as in claim 1, wherein the hearing aid is disposable.
- 5 6. A method as in claim 1, wherein a selection of a format by a user is permanent so that the hearing aid cannot be reprogrammed.
7. A method as in claim 1, wherein an acoustical format is selected by holding the hearing aid device to a
10 phone receiver and pressing at least one keypad.
8. A method as in claim 1, wherein the command is transmitted via a wireless signal.
9. A method as in claim 2, wherein the digital data for selecting an acoustical format is stored in a volatile
15 memory device.
10. A method as in claim 9, wherein the volatile memory device is RAM (Random Access Memory).
11. A method as in claim 1, wherein a selection of a format by a user is temporary so that the hearing aid
20 can be subsequently reprogrammed with a different acoustical format.
12. A method as in claim 1 further comprising the steps of:

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filtering an acoustical input of the hearing aid
to detect an audible programming command; and
programming the hearing aid according to the
audible programming command.

- 5 13. A method as in claim 12, wherein the audible
programming command is generated via DTMF (Dual Tone
Multiple Frequency) signals.
14. A method as in claim 1 further comprising the step of:
amplifying an acoustical input of the hearing aid
10 based upon a selected acoustical format.
15. A method as in claim 14 further comprising the step
of:
storing a compensation factor in memory of the
hearing aid corresponding to characteristics of a
15 tested component disposed in the hearing aid; and
modifying an acoustical response of the hearing
aid based upon the compensation factor.
16. A method for modifying an acoustical response of a
hearing aid, the method comprising the steps of:
20 testing a component to be used in the hearing aid
by measuring a characteristic of the component;
identifying an appropriate compensation factor to
correct for a variation in the component; and
storing the compensation factor in a memory
25 device to compensate for the component disposed in the
hearing aid.

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17. A method as in claim 16 further comprising the step
of:
compensating for the variation in the component
of the hearing aid device so that an overall
5 acoustical response of the hearing aid conforms to a
standard.
18. A method as in claim 16, wherein the component is a
microphone used in the hearing aid.
19. A method as in claim 16, wherein the component is a
10 speaker used in the hearing aid.
20. A method as in claim 16, wherein the component is an
assembly including an electronic circuit.
21. A method as in claim 20, wherein the electronic
circuit includes an amplifier.
- 15 22. A method as in claim 20, wherein the component is an
assembly including a memory device in which a
compensation factor is stored.
23. A method as in claim 22, wherein the compensation
factor is stored in the memory device prior to
20 assembly of the component in a hearing aid.
24. A method as in claim 16, wherein the memory device is
EEPROM (Electrically Erasable Programmable Read Only
Memory).

25. A method as in claim 16 further comprising the step
of:
storing encoded data in the memory device for
selecting one of multiple programmable acoustical
5 responses of the hearing aid.
26. A method as in claim 16 further comprising the step
of:
latching a digitally encoded compensation factor
into a register device that drives circuitry disposed
10 between a microphone and speaker of the hearing aid to
compensate for the variation in the component.
27. A method as in claim 16 further comprising the step
of:
testing multiple components of a similar type and
15 grouping the components based on a corresponding
deviation from a standard.
28. A method as in claim 27 further comprising the steps
of:
assigning a compensation factor to a group of
20 tested components having similar characteristics; and
programming the hearing aid that includes a
component selected from a particular group with a
corresponding assigned compensation factor.
29. A method as in claim 16, wherein the compensation
25 factor is used to adjust a gain of the hearing aid
device.

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30. A method as in claim 16, wherein the compensation factor is used to adjust an offset of the hearing aid device.
31. A method as in claim 20, wherein the characteristic response is an acoustical response.
32. A method for selecting an acoustical response of a hearing aid, the method comprising the steps of:
- selecting one of multiple acoustical formats of the hearing aid by transmitting a command;
 - receiving the command at the hearing aid to determine which of the multiple acoustical formats is selected by a user; and
 - providing a patient with a programmer module that is temporarily coupled to the hearing aid for programming an acoustical format.
33. A method as in claim 32, wherein the command includes digital data that is stored in a memory device of the hearing aid to select an acoustical format.
34. A method as in claim 32, wherein the received command includes digital data that is latched to drive at least one input to a digital filter that defines the acoustical response of the hearing aid.
35. A method as in claim 32, wherein the user presses a keypad of the programmer module to select the acoustical format and a corresponding command is transmitted via a signal to the hearing aid device to program the acoustical format.

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36. A method as in claim 32, wherein the hearing aid is disposable.
37. A method as in claim 32, wherein a selection of a format by a user is permanent so that the hearing aid cannot be reprogrammed.
38. A method as in claim 32 further comprising the step of:
amplifying an acoustical input of the hearing aid based upon a programmed acoustical format.
39. A method as in claim 32 further comprising the step of:
storing a compensation factor in memory of the hearing aid corresponding to characteristics of a tested component disposed in the hearing aid; and
modifying an acoustical response of the hearing aid based upon the compensation factor.